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**From:** Reddy - CDPHE, Patrick [patrick.reddy@state.co.us]  
**Sent:** 3/18/2014 3:34:02 PM  
**To:** Tonnesen, Gail [Tonnesen.Gail@epa.gov]  
**CC:** Andrew Langford [andrew.o.langford@noaa.gov]; Brad Pierce [brad.pierce@noaa.gov]; Briggs, Kevin [Kevin.Briggs@state.co.us]; Payton, Richard [Payton.Richard@epa.gov]; Scott Landes - CDPHE [scott.landes@state.co.us]; emmett.malone@state.co.us; Chuck.Machovec@state.co.us; Pierce', 'GORDON [Gordon.Pierce@state.co.us]; gregory.harshfield@state.co.us  
**Subject:** Re: Not much O3 in Colorado  
**Attachments:** March 18 2014 NAM80 IPV analysis.png

I have attached 3d plot of the 1.5 PVU isentropic potential vorticity surface from this morning's 80 km NAM 80 km run for 12z or 6AM MST. It's a little hard to see, but the fold in the center of the image stays above the 550 mb surface (black contour lines over Colorado). The red vertical line is centered in Colorado. Not all blobs of high IPV over the US are folds (although many are). Some are precipitation processes.

Pat

On Tue, Mar 18, 2014 at 9:17 AM, Tonnesen, Gail <[Tonnesen.Gail@epa.gov](mailto:Tonnesen.Gail@epa.gov)> wrote:

It's snowing pretty hard in Denver right now. It would have been interesting to have high ozone levels for the call, but the null case is also interesting as a test to see if the analysis tools are consistent with no stratospheric intrusion.

Thanks,

Gail

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**From:** Andrew Langford [mailto:[andrew.o.langford@noaa.gov](mailto:andrew.o.langford@noaa.gov)]  
**Sent:** Tuesday, March 18, 2014 9:12 AM  
**To:** Reddy - CDPHE, Patrick  
**Cc:** Brad Pierce; Briggs, Kevin; Tonnesen, Gail; Payton, Richard; Scott Landes - CDPHE; [emmett.malone@state.co.us](mailto:emmett.malone@state.co.us); [Chuck.Machovec@state.co.us](mailto:Chuck.Machovec@state.co.us); Pierce', 'GORDON; [gregory.harshfield@state.co.us](mailto:gregory.harshfield@state.co.us)  
**Subject:** Re: Not much O3 in Colorado

Too cloudy for lidar too!

Sent from my iPhone

On Mar 18, 2014, at 9:05, "Reddy - CDPHE, Patrick" <[patrick.reddy@state.co.us](mailto:patrick.reddy@state.co.us)> wrote:

We had a few sites spike at 60 or 61 ppb last night, but the atmosphere looks a little different today than expected. Poor vertical mixing, snow bands, and no sign of a fold in this AMs sounding.

Pat

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Patrick J. Reddy

Senior Air Quality Meteorologist

Modeling, Meteorology, and Emissions Inventory Unit

Technical Services Program

Air Pollution Control Division

Colorado Department of Public Health and Environment

APCD-TS-B1

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<image001.png> <image002.jpg> <image003.jpg> <image004.png>

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